



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 19, 1999

D. Michael Light
Manager, Remedial Projects
Solutia, Inc.
10300 Olive Boulevard
St. Louis, Missouri 63166-6760

RE: Final Administrative Order By Consent, Sauget Area 1 Site
Sauget and Cahokia, Illinois

Dear Mr. Light:

Enclosed please find an executed copy of the Administrative Order by Consent issued for the Sauget Area 1 Site pursuant to Sections 104, 106 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9604, 9606 and 9622. Thank you for your cooperation in this matter.

If you have any questions regarding this Order, please contact Thomas Martin, Associate Regional Counsel, at (312) 886-4273 or Michael McAteer, Remedial Project Manager, at (312) 886-4663.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Wm. E. Muno", is written over the typed name.

William E. Muno, Director
Superfund Division

Enclosure

cc: Gary King, Deputy Manager,
Division of Land Pollution Control
Illinois Environmental Protection Agency

bcc: Docket Analyst, ORC (C-14J)
Tom Martin, ORC (C-14J)
Mike McAteer, SFD (SR-6J)
Doug Ballotti, (SR-6J)
Bruce Sypniewski, (SR-6J)
Mary Ellen Ryan, SFAS (MF-10J)
Toni Lesser, Public Affairs (P-19J) w/out attachments
Mike Chezik, Department of Interior

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	Docket No.
)	
SAUGET AREA 1 SITE	)	ADMINISTRATIVE ORDER BY
	)	CONSENT PURSUANT TO
SAUGET AND CAHOKIA, ILLINOIS	)	SECTION 106 OF THE
	)	COMPREHENSIVE
	)	ENVIRONMENTAL RESPONSE,
Respondents:	)	COMPENSATION, AND
	)	LIABILITY ACT OF 1980,
MONSANTO CO. and SOLUTIA, INC.	)	as amended, 42 U.S.C.
	)	§ 9606(a)
)	

I. JURISDICTION AND GENERAL PROVISIONS

This Administrative Order by Consent ("the Order") is entered by the United States Environmental Protection Agency ("U.S. EPA") and the Respondents. The Order is issued pursuant to the authority vested in the President of the United States by Sections 104, 106(a), and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. §§ 9604, 9606(a), and 9622. This authority has been delegated to the Administrator of the U.S. EPA by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2923, and further delegated to the Regional Administrators by U.S. EPA Delegation Nos. 14-14-A, 14-14-C and 14-14-D, and to the Director, Superfund Division, Region 5, by Regional Delegation Nos. 14-14-A, 14-14-C and 14-14-D.

U.S. EPA sent Special Notice Letters, pursuant to Section 122(e)(1) of CERCLA, 42 U.S.C. § 9622(e)(1), requesting the action that is the subject of this Order, be performed. The Notice Letters were sent to 26 parties which were identified by U.S. EPA as potentially responsible. Respondents are the only recipients who responded positively to the Notice Letter.

This Order requires the Respondents to conduct an Engineering Evaluation and Cost Analysis ("EE/CA") for the Sauget Area 1 source areas (Sites I, H, G, L, M and N) and the impacted portions of Area 1 (Dead Creek Segments ("CS") CS-A, CS-B, CS-C, CS-D, CS-E and CS-F and any possibly contaminated residential/commercial properties adjacent to these creek segments). This Order also requires the Respondents to conduct a Remedial Investigation and Feasibility Study (RI/FS) for Sauget Area 1 groundwater. The EE/CA and RI/FS shall evaluate response actions pursuant to 40 CFR Part 300.415(b)(4)(I), to address the environmental concerns in connection with the above listed areas of concern located within and surrounding the area designated as

Sauget Area 1 (generally depicted in figure 1 in the attached SOW) located within the towns of Sauget and Cahokia, St. Clair County, Illinois.

A copy of this Order will also be provided to the State of Illinois, which has been notified of the issuance of this Order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). The U.S. EPA has also notified the Federal Natural Resource trustee of the negotiations in this action pursuant to the requirements of Section 122(j) of CERCLA.

Respondents' participation in this Order shall not constitute an admission of liability or of U.S. EPA's findings or determinations contained in this Order except in a proceeding to enforce the terms of this Order. Respondents agree to comply with and be bound by the terms of this Order. Respondents further agree that they will not contest the basis or validity of this Order or its terms.

II. PARTIES BOUND

This Order applies to and is binding upon U.S. EPA, and upon Respondents and Respondents' heirs, receivers, trustees, successors and assigns. Any change in ownership or corporate status of Respondents including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondents' responsibilities under this Order. Respondents are jointly and severally liable for carrying out all activities required by this Order. Compliance or noncompliance by one or more Respondents with any provision of this Order shall not excuse or justify noncompliance by any other Respondent.

Respondents shall ensure that their contractors, subcontractors, and representatives receive a copy of this Order, and comply with this Order. Respondents shall be responsible for any noncompliance with this Order.

III. FINDINGS OF FACT

Based on available information, including the Administrative Record in this matter, U.S. EPA hereby finds, and, for purposes of enforceability of this Order only, the Respondents stipulate that the factual statutory prerequisites under CERCLA necessary for issuance of this Order have been met. U.S. EPA's findings and this stipulation include the following:

1. The source areas for Sauget Area 1 consist of six known disposal areas adjacent, or in close proximity, to Dead Creek. The six disposal areas are known as Sites I, H, G, L, M and N (see figure 1 in attached SOW). The sites are labeled with letter designations for reference purposes

only. The fact that source areas have separate letter designations does not necessarily mean that the areas are separate or distinct in terms of contents, ownership, and/or operating history.

SITE I: Located north of Queeny Avenue, west of Falling Springs Road and south of the Alton & Southern Railroad in the Village of Sauget it occupies approximately 19 acres of land. Segment CS-A of Dead Creek borders Site I on the Site's western side. The site is currently graded and covered with crushed stone and used for equipment and truck parking. Site I was originally used as a sand and gravel pit which received industrial and municipal wastes. Site I is connected to Site H (see below) under Queeny Avenue and together they were known to be part of the "Sauget-Monsanto Landfill." The landfill operated from approximately 1931 to 1957. On information and belief, wastes from Site I leached and/or were released into CS-A and available downstream creek segments until CS-A was remediated in 1990. On information and belief, Site I served as a disposal area for contaminated sediments from historic dredgings of Dead Creek Segment A.

SITE H: Located south of Queeny Avenue, west of Falling Springs Road and west of the Metro Construction Company property in the Village of Sauget, it occupies approximately 5 to 7 acres of land. The southern boundary of Site H is not known with certainty but it is estimated that the fill area extends approximately 1,250 feet south of Queeny Avenue. Site H is connected to Site I under Queeny Avenue and together they were known to be part of the Sauget-Monsanto Landfill which operated from approximately 1931 to 1957. Site H is not currently being used and the property is graded and grass-covered with some areas of exposed slag.

SITE G: Located south of Queeny Avenue, east of (and possibly under) the Wiese Engineering facility, and north of a cultivated field in the Village of Sauget. CS-B of Dead Creek is located along the eastern boundary of the Site. This site is approximately 5 acres in size and it was operated and served as a disposal area from approximately 1952 to the late 1980's. The Site was fenced in 1988 pursuant to a U.S. EPA removal action under CERCLA which was funded by potentially responsible parties, including Monsanto. On information and belief, wastes located on the surface and/or in the subsurface of Site G have spontaneously combusted and/or burned for long periods of time on several occasions. U.S. EPA conducted a second CERCLA removal action at Site G in 1995. This removal action involved the excavation of PCB, organics, metals, and dioxin contaminated soils on and surrounding Site G,

solidification of open oil pits on the Site, and covering part of the Site (including the excavated contaminated soils) with a clean soil cap approximately 18 to 24 inches thick. Site G is enclosed by a fence and is not currently being used. The property is vegetated.

On information and belief, wastes from Site G have in the past and potentially continue to leach and/or release into CS-B and available downstream creek segments.

SITE L: Located immediately east of Dead Creek CS-B and south of the Metro Construction Company property in the Village of Sauget. Site L is the former location of two surface impoundments used from approximately 1971 to 1981 for the disposal of wash water from truck cleaning operations. This site is now covered by black cinders and is used for equipment storage. On information and belief, Site L wastes have migrated into Site M (see below).

SITE M: Located along the eastern side of Dead Creek CS-B (south of Site L) at the western end of Walnut Street in the Village of Cahokia. Site M was originally used as a sand borrow pit (dimensions = 220 feet by 320 feet) in the mid to late 1940's. The pit is hydrologically connected to Dead Creek through an eight-foot opening at the southwest portion of the pit. On information and belief, wastes from CS-B have in the past and potentially continue to migrate into Site M via this connection. The site is currently fenced.

SITE N: Located along the eastern side of Dead Creek CS-C, south of Judith Lane and north of Cahokia Street in the Village of Cahokia. This Site encompasses approximately 4 to 5 acres of previously excavated land used to dispose of concrete rubble and demolition debris. The excavation began in the 1940's and the site is currently inactive and fenced.

DEAD CREEK SEGMENTS A THROUGH F: Dead Creek stretches from the Alton & Southern Railroad at its northern end and flows south through Sauget and Cahokia for approximately 3.5 miles before emptying into the Old Prairie du Pont Creek, which flows approximately 2,000 feet west into a branch of the Mississippi River known as the Cahokia Chute. For many years, Dead Creek has been a repository for local area wastes. On December 31, 1928, an easement agreement between local property owners and representatives of local business, municipal and property interests was executed to "improve the drainage in that District (Dead Creek) by improving Dead Creek so as to make it suitable for the disposal of wastewater, industrial waste, seepage and storm water." Thereafter, Dead Creek systematically received direct and

indirect discharges from local businesses and from the Village for many years to come.

Creek Segment CS-A is the northernmost segment of the creek. It is approximately 1,800 feet long and 100 feet wide, running from the Alton & Southern Railroad to Queeny Avenue. This segment of the creek originally consisted of two holding ponds which were periodically dredged. For several years, CS-A and available downstream creek segments (e.g., ones that were not blocked off) received direct wastewater discharges from industrial sources and served as a surcharge basin for the Village of Sauget (formerly Village of Monsanto) municipal sewer collection system. When the system became backed up or overflowed, untreated wastes from industrial users of the sewer system were discharged directly into CS-A. On several occasions, CS-A was dredged and contaminated sediments were disposed of onto adjacent Site I. In 1968, the Queeny Avenue culvert, which allowed creek water to pass from CS-A to CS-B, was permanently blocked by the Village of Sauget.

Remediation work was conducted by Cerro Copper in CS-A in 1990. Approximately 27,500 tons of contaminated sediments were removed to RCRA and TSCA permitted facilities. CS-A is now filled and covered with crushed gravel. Land use surrounding CS-A is industrial.

Creek Segment CS-B extends for approximately 1,800 feet from Queeny Avenue south to Judith Lane. Sites G, L, and M border this creek segment. Land use surrounding CS-B is primarily commercial with a small residential area near the southern end of this segment. Agricultural land lies to the west of the creek and south of Site G. In 1965, the Judith Lane culvert, which allowed creek water to pass from CS-B to CS-C, was blocked. CS-B is hydrologically connected to Site M by a manmade ditch (see above).

Creek Segment CS-C extends for approximately 1,300 feet from Judith Lane south to Cahokia Street. Site N borders this creek segment. Land use is primarily residential along both sides of CS-C.

Creek Segment CS-D extends for approximately 1,100 feet from Cahokia Street to Jerome Lane. Land use is primarily residential along both sides of CS-D.

Creek Segment CS-E extends approximately 4,300 feet from Jerome Lane to the intersection of Illinois Route 3 and Route 157. Land use surrounding CS-E is

predominantly commercial with some mixed residential use. Dead Creek temporarily passes through corrugated pipe at the southern end of CS-E.

Creek Segment CS-F is approximately 6,500 feet long and extends from Route 157 to the Old Prairie du Pont Creek. CS-F is the widest segment of Dead Creek and a large wetland area extends several hundred feet out from both sides of the creek.

2. Information on the types of wastes disposed of and the types and levels of contamination found at the Sauget Area 1 Site have been provided to U.S. EPA from various sources, including, but not exclusively from: 1) CERCLA 103(c) Submittals; 2) CERCLA 104(e) Responses; 3) Expanded Site Investigation Dead Creek Project Sites (E & E, 1988); 4) Removal Action Plan for Dead Creek Sites (Weston-SPER, 1987); 5) Description of Current Situation at the Dead Creek Project Sites (E & E, 1986); 6) Site Investigations for Dead Creek Sector B and Sites L and M (Geraghty & Miller, Inc. 1992); 7) Site Investigation/Feasibility Study for Creek Segment A (Advent Group, 1990); 8) Preliminary Ecological Risk Assessment for Sauget Area 1, Creek Segment F (E & E, 1997); 9) EPA Removal Action Report for Site G (E & E 1994); 10) Area One Screening Site Inspection Report; and 11) Site Investigation Feasibility Study for Creek Segment A (Advent Group 1990).

Known contaminants at the Sauget Area 1 Site are as follows:

SITE I: On information and belief, this site accepted chemical wastes from approximately 1931 to the late 1950's. Municipal wastes were also disposed of in Site I. Site I contains approximately 250,000 cubic yards of contaminated wastes and fill material. No subsurface containment is in place beneath Site I. Soil samples collected from Site I have revealed elevated levels of volatile organic compounds (VOCs) such as 1,1,1-trichloroethane (1,692 ppb), trichloroethene (3,810 ppb), benzene (24,130 ppb), tetrachloroethene (5,265 ppb), toluene (77,910 ppb), chlorobenzene (126,900 ppb), ethyl benzene (15,070 ppb), and total xylenes (19,180 ppb). Soil samples also revealed elevated levels of semi-volatile organic compounds (SVOCs) such as 1,3-dichlorobenzene (70,140 ppb), 1,4-dichlorobenzene (1,837,000 ppb), 1,2-dichlorobenzene (324,000 ppb), naphthalene (514,500 ppb), and hexachlorobenzene (1,270,000 ppb). Soil samples also revealed elevated levels of polychlorinated biphenyls (PCBs), such as arochlor 1260 (342,900 ppb), and the pesticides 4,4-DDD (29,694 ppb), 4,4-DDT (4,305 ppb) and toxaphene (492,800 ppb). Elevated levels of metals were

also found in soils, such as beryllium (1,530 ppm), copper (630 ppm), lead (23,333 ppm), zinc (6,329 ppm) and cyanide (3,183 ppm).

Groundwater samples collected from beneath Site I have revealed elevated levels of VOCs such as vinyl chloride (790 ppb), trichloroethene (279 ppb), benzene (1,400 ppb), tetrachloroethene (470 ppb), toluene (740 ppb), and chlorobenzene (3,100 ppb). Elevated levels of SVOCs were also detected in groundwater, such as phenol (1,800 ppb), bis-(2-chloroethoxy)methane (2,900 ppb), 1,2,4-trichlorobenzene (2,700 ppb), 4-chloroaniline (9,600 ppb), and pentachlorophenol (2,400 ppb).

SITE H: Due to the physical connection to Site I, waste disposal at Site H was similar to that at Site I. Chemical wastes were disposed of here from approximately 1931 to 1957. Wastes included drums of solvents, other organics and inorganics, including PCBs, para-nitro-aniline, chlorine, phosphorous pentasulfide, and hydrofluosilic acid. Municipal wastes were also reportedly disposed of at Site H. The estimated volume of wastes in Site H is 110,000 cubic yards. There is no containment beneath Site H. Soil samples collected at Site H revealed elevated levels of VOCs such as benzene (61,290 ppb), tetrachloroethene (5,645 ppb), toluene (76,450 ppb), chlorobenzene (451,613 ppb), ethyl benzene (12,788 ppb), and total xylenes (23,630 ppb). Elevated levels of SVOCs were also found in soil samples such as 1,4-dichlorobenzene (30,645,161 ppb), 1,2-dichlorobenzene (19,354,839 ppb), 1,2,4-trichlorobenzene (7,580,645 ppb), 4-nitroaniline (1,834,000 ppb), phenanthrene (2,114,000 ppb), and fluoranthene (1,330,000 ppb). Soil samples also revealed elevated levels of PCBs such as arochlor 1260 (18,000,000 ppb), and pesticides 4,4-DDE (780 ppb), 4,4-DDD (431 ppb), and 4,4-DDT (923 ppb). Elevated levels of metals were found such as arsenic (388 ppm), cadmium (294 ppm), copper (2,444 ppm), lead (4,500 ppm), manganese (36,543 ppm), mercury (3.9 ppm), nickel (15,097 ppm), silver (44 ppm), and zinc (39,516 ppm).

Groundwater samples collected from beneath Site H revealed elevated levels of VOCs such as chloroform (3,000 ppb), benzene (4,300 ppb), and toluene (7,300 ppb). Elevated levels of SVOCs were detected in groundwater such as phenol (950 ppb) and pentachlorophenol (650 ppb). An elevated level of PCBs (arochlor 1260 at 52 ppb) was also detected in groundwater at Site H. Elevated levels of metals were also detected in groundwater such as arsenic (8,490 ppb), copper (2,410 ppb), nickel (17,200 ppb) and cyanide (480 ppb).

SITE G: Operated as a landfill from approximately 1952 to 1966. The site was subject to intermittent dumping thereafter until 1988, when the Site was fenced. There is an estimated 60,000 cubic yards of wastes within Site G, including oil pits, drums containing wastes, paper wastes, documents and lab equipment. Soil samples collected from Site G revealed elevated levels of VOCs such as chloroform (11,628 ppb), benzene (45,349 ppb), tetrachloroethene (58,571 ppb), chlorobenzene (538,462 ppb), and total xylenes (41,538 ppb). Soil samples also revealed elevated levels of SVOCs such as phenol (177,800 ppb), naphthalene (5,428,571 ppb), 2,4,6-trichlorophenol (49,530 ppb), and pentachlorophenol (4,769,231 ppb). Elevated levels of the pesticide 4,4-DDE were detected up to 135,385 ppb. Elevated levels of PCBs were detected at levels as high as 174,419 ppb (arochlor 1248) and 5,300,000 ppb (arochlor 1260). Dioxin levels in soils at Site G were detected at levels as high as 44,974 ppb. Metals were detected at elevated concentrations such as arsenic (123 ppm), barium (45,949 ppm), copper (2,215 ppm), lead (3,123 ppm), mercury (34.3 ppm), nickel (399 ppm), and zinc (4,257 ppm). Samples collected from wastes which appeared to be a pure solid product material on Site G revealed PCB levels as high as 3,000,000 ppb and dioxin levels in excess of 50,661 ppb.

Groundwater samples collected from beneath Site G revealed elevated levels of VOCs such as trans-1,2-dichloroethene (200 ppb), 1,2-dichloroethane (480 ppb), trichloroethene (800 ppb), benzene (4,100 ppb), tetrachloroethene (420 ppb), toluene (7,300 ppb), and ethyl benzene (840 ppb). Elevated levels of SVOCs were detected such as 1,2,4-trichlorobenzene (1,900 ppb), naphthalene (21,000 ppb), 4-chloroaniline (15,000 ppb), and 2,4,6-trichlorophenol (350 ppb). An elevated concentration of PCBs was detected at 890 ppb (arochlor 1260). Elevated metals in groundwater beneath Site G included arsenic (179 ppb), mercury (2.1 ppb), nickel (349 ppb), zinc (1,910 ppb) and cyanide (350 ppb).

SITE L: This site was originally used as a disposal impoundment from approximately 1971 to 1981. The volume of contaminated fill material in Site L is not known, however, the area of the impoundment is estimated to be 7,600 square feet. There is no known containment of wastes beneath Site L. Soil samples collected at Site L revealed elevated levels of VOCs such as chloroform (20,253 ppb), benzene (4,177 ppb), and toluene (26,582 ppb). Elevated levels of SVOCs were also detected such as 2-chlorophenol (2,152 ppb), pentachlorophenol (58,228 ppb), and di-n-butyl phthalate (2,784 ppb). Total PCBs were found at a level of 500 ppm in soils. Elevated levels of metals were detected such as

antimony (32 ppm), arsenic (172 ppm), and nickel (2,392 ppm).

Groundwater samples collected from beneath Site L revealed elevated levels of VOCs such as chloroform (730 ppb) and benzene (150 ppb). SVOCs were also detected in groundwater such as phenol (150 ppb), 2-chlorophenol (130 ppb), 4-methyl phenol (75 ppb), 2-nitrophenol (41 ppb), and 4-chloroaniline (60 ppb). Elevated levels of metals in groundwater included arsenic (14,000 ppb), cadmium (32 ppb) and zinc (2,210 ppb).

SITE M: Originally constructed as a sand borrow pit in the mid to late 1940's, this pit is approximately 59,200 square feet in size and previous investigations indicate that approximately 3,600 cubic yards of contaminated sediments are contained within the pit. It is estimated that the pit is approximately 14 feet deep and it is probable that there is a hydraulic connection between this pit water and the underlying groundwater. Surface water samples collected from Site M revealed elevated levels of VOCs such as chloroform (27 ppb), toluene (19 ppb) and chlorobenzene (33 ppb). SVOCs detected in surface water included phenol (28 ppb), 2-chlorophenol (14 ppb), 2,4-dimethyl phenol (13 ppb), 2,4-dichlorophenol (150 ppb), and pentachlorophenol (120 ppb). Pesticides detected in surface water include dieldrin (0.18 ppb), endosulfan II (.06 ppb), 4,4-DDT (0.24 ppb), 2,4-D (47 ppb) and 2,4,5-TP (Silvex) (3.4 ppb). PCBs were also detected in surface water at a maximum level of 0.0044 ppb.

Sediment samples collected from Site M revealed elevated levels of VOCs such as 2-butanone (14,000 ppb), chlorobenzene (10 ppb) and ethyl benzene (0.82 ppb). SVOCs detected in sediments included 1,4-dichlorobenzene (40 ppm), 1,2-dichlorobenzene (26 ppm), 1,2,4-trichlorobenzene (14 ppm), pyrene (27 ppm), fluoranthene (21 ppm), chrysene (12 ppm), and benzo(b)fluoranthene (15 ppm). Total PCB levels were detected as high as 1,100 ppm. Elevated levels of metals were also detected in sediments at Site M, including antimony (41.2 ppm), barium (9,060 ppm), cadmium (47.2 ppm), copper (21,000 ppm), nickel (2,490 ppm), silver (26 ppm), zinc (31,600 ppm), lead (1,910 ppm), arsenic (94 ppm) and cyanide (1.3 ppm).

SITE N: Initially developed as a borrow pit in the 1940's, this Site has been filled with concrete rubble, scrap wood and other demolition debris. The depth of the fill may be as much as 30 feet and it occupies approximately 4 to 5 acres of land. Soil samples collected from Site N revealed the presence of SVOCs such as phenanthrene (434 ppb), fluoranthene (684 ppb), and pyrene (553 ppb). An elevated

level of mercury (9 ppm) was also detected in soil at Site N.

CREEK SEGMENT CS-A: Approximately 20,000 cubic yards of contaminated material were removed from this segment of Dead Creek in 1990, and the area was then backfilled with clean material. The assumption that only low-levels of residual contamination may currently exist within CS-A is yet to be confirmed. Prior to remediation activities, soil and sediment samples collected from CS-A revealed elevated levels of VOCs such as 1,2-dichloroethene (15,000 ppb), trichloroethene (100,000 ppb), tetrachloroethene (11,000 ppb), chlorobenzene (31,000 ppb), ethyl benzene (80,000 ppb), and xylene (500,000 ppb). Elevated levels of SVOCs detected in soils and sediments included 1,3-dichlorobenzene, 4-chloroaniline (17,000 ppb), acetophenone (24,000 ppb), 1,2,4,5-tetrachlorobenzene (28,000 ppb), pentachlorobenzene (37,000 ppb), phenanthrene (14,000 ppb), and pyrene (10,000 ppb). Elevated levels of PCBs (total) were also detected at a maximum concentration of 3,145,000 ppb. Elevated levels of metals were also detected in soils and sediments in CS-A including silver (348 ppm), arsenic (194 ppm), cadmium (532 ppm), copper (91,800 ppm), mercury (124 ppm), nickel (6,940 ppm), lead (32,400 ppm), antimony (356 ppm), selenium (41.6 ppm), and zinc (26,800 ppm).

CREEK SEGMENT CS-B: Elevated levels of VOCs and SVOCs were detected in sediment samples collected from CS-B such as benzene (87 ppb), toluene (810 ppb), chlorobenzene (5,200 ppb), ethyl benzene (3,600 ppb), trichlorobenzene (3,700 ppm), dichlorobenzene (12,000 ppm), chloronitrobenzene (240 ppm), xylenes (540 ppm), 1,4-dichlorobenzene (220,000 ppb), 1,2-dichlorobenzene (17,000 ppb), phenanthrene (15,000 ppb), fluoranthene (11,000 ppb), pyrene (13,000 ppb). Elevated levels of PCBs exist within CS-B at levels as high as 10,000 ppm. Elevated levels of metals were also detected in sediments in CS-B including arsenic (6,000 ppm), cadmium (400 ppm), copper (44,800 ppm), lead (24,000 ppm), mercury (30 ppm), nickel (3,500 ppm), silver (100 ppm), and zinc (71,000 ppm).

Surface water samples collected from CS-B revealed elevated concentrations of VOCs such as chloroform (27 ppb), 1,1-dichloroethene (3 ppb), toluene (20 ppb), and chlorobenzene (33 ppb). SVOCs detected in surface water included phenol (28 ppb), 2-chlorophenol (14 ppb), 1,4-dichlorobenzene, 2-methyl phenol (4 ppb), 4-methyl phenol (35 ppb), 2,4-dichlorophenol (150 ppb), naphthalene (8 ppb), 3-nitroaniline (9 ppb), and pentachlorophenol (120 ppb). Pesticides were also detected in surface water samples including dieldrin (0.18 ppb), 4,4-DDT (0.24 ppb), 2,4-D (47

ppb) and Silvex (3.4 ppb). An elevated level of PCBs (aroclor 1260) was also detected in the surface water of CS-B at a level of 44 ppb. Elevated levels of metals were detected in surface water such as aluminum (9,080 ppb), barium (7,130 ppb), arsenic (31 ppb), cadmium (25 ppb), chromium (99 ppb), copper (17,900 ppb), lead (1,300 ppb), mercury (8.6 ppb), nickel (1,500 ppb), and zinc (10,300 ppb).

CREEK SEGMENT CS-C: Elevated levels of VOCs and SVOCs were detected in sediments in this segment of Dead Creek including fluoranthene (4,600 ppb), pyrene (4,500 ppb), benzo(a)anthracene (3,300 ppb), chrysene (4,400 ppb), benzo(b)fluoranthene (7,500 ppb), benzo(a)pyrene (4,500 ppb), indeno(1,2,3-cd)pyrene (4,300 ppb), benzo(g,h,i)perylene (1,500 ppb), dibenzo(a,h)anthracene (4,000 ppb), and 4-methyl-2-pentanone (1,200 ppb). PCBs (total) were also detected in sediments from CS-C at a maximum concentration of 27,500 ppb. Sediment samples also revealed elevated levels of metals such as copper (17,200 ppm), lead (1,300 ppm), nickel (2,300 ppm), zinc (21,000 ppm) and mercury (2.81 ppm).

Surface water samples collected from creek segment CS-C revealed elevated levels of metals such as lead (710 ppb), mercury (1.9 ppb), and nickel (83 ppb).

CREEK SEGMENT CS-D: Elevated concentrations of VOCs and SVOCs were detected in sediment samples collected from CS-D including 4-methyl-2-pentanone (1,200 ppb), benzo(b)fluoranthene (500 ppb), indeno(1,2,3-cd)pyrene (310 ppb), and dibenzo(a,h)anthracene (360 ppb). PCBs (total) were detected in sediments at a maximum concentration of 12,000 ppb. Elevated concentrations of metals were also detected such as cadmium (42 ppm), copper (1,630 ppm), lead (480 ppm), mercury (1 ppm), and zinc (6,590 ppm).

Surface water samples collected from CS-D revealed elevated concentrations of metals such as cadmium (8.1 ppb), lead (89 ppb), and nickel (189 ppb).

CREEK SEGMENT CS-E: Elevated concentrations of VOCs and SVOCs were detected in sediment samples collected from CS-E including chlorobenzene (120 ppb), pyrene (5,300 ppb), benzo(b)fluoranthene (2,400 ppb), and chrysene (2,800 ppb). Elevated levels of PCBs (total) were also detected at a maximum concentration of 59,926 ppb. Elevated levels of metals were also detected in the sediments of CS-E including cadmium (23.1 ppm), copper (8,540 ppm), lead (1,270 ppm), mercury (1.53 ppm), nickel (2,130 ppm), and zinc (9,970 ppm).

CREEK SEGMENT CS-F: Elevated concentrations of VOCs and SVOCs were detected in the sediments of CS-F such as toluene (29 ppb), 4-methyl phenol (1,100 ppb), fluoranthene (310 ppb), and pyrene (340 ppb). Pesticides were also detected in the sediments such as 4,4-DDE (97 ppb), endrin (66 ppb), endosulfan II (203 ppb), and methoxychlor (8 ppb). PCBs (total) were also detected in sediments at a maximum concentration of 5,348 ppb. Elevated levels of metals were also detected in the sediments such as arsenic (276 ppm), lead (199 ppm), mercury (0.55 ppm), cadmium (23.5 ppm), copper (520 ppm), nickel (772 ppm) and zinc (4,520 ppm). Elevated concentrations of dioxins were also detected in sediments in CS-F at a maximum concentration of 211 picograms per gram.

3. On information and belief, parties which generated wastes which were disposed of, released into and/or transported wastes to the Sauget Area 1 Site (including parties whose wastes migrated from various disposal areas into other Sites or segments of Dead Creek), include but are not limited by the following:

SITE I: Monsanto Corporation/Solutia, Incorporated; Cerro Copper Products Company; Cardinal Construction Company; Amax Zinc Corporation; and Mobil Oil Corporation; Ethyl Petroleum; Village of Sauget; Olin Corporation.

SITE H: Monsanto Corporation/Solutia, Incorporated.

SITE G: Monsanto Corporation/Solutia, Incorporated; Mobil Oil Corporation; Wiese Planning and Engineering, Inc.

SITE L: Waggoner & Company; Monsanto Corporation/Solutia, Incorporated; and Ruan Transportation; Olin Corporation.

SITE M: Monsanto Corporation/Solutia, Incorporated; Waggoner & Company; and Ruan Transportation; Mobil Oil Corporation; Cerro Copper Products, Inc.; Midwest Rubber Reclaiming (Division of Empire Chemical Incorporated) and Midwest Rubber Trustees Stanley Keitman, Richard M. Cohen, and Morris Weissman.

SITE N: H.H. Hall Construction Company.

DEAD CREEK SEGMENT CS-A: Monsanto Corporation Company/Solutia, Incorporated; Cerro Copper Products Company; Amax Zinc Corporation; Mobil Oil Corporation; Ethyl Petroleum and the Village of Sauget; Cardinal Construction Co.; Olin Corporation.

DEAD CREEK SEGMENT CS-B: Monsanto Corporation Company/Solutia, Incorporated; Midwest Rubber Reclaiming (Division of Empire Chemical Incorporated) and Midwest Rubber Trustees Stanley Keitman, Richard M. Cohen, and Morris Weissman; Cerro Copper Products Company; Mobil Oil Corporation; Ruan Transportation Corporation; Waggoner & Company; Industrial Disposal, Inc.; Sauget and Company; Paul Sauget; Olin Corporation.

DEAD CREEK SEGMENTS C, D, E or F: Monsanto Corporation/Solutia, Incorporated; Cerro Copper Products Company; Mobil Oil Company; Amax Zinc Corporation; Midwest Rubber Reclaiming (Division of Empire Chemical Incorporated) and Midwest Rubber Trustees Stanley Keitman, Richard M. Cohen, and Morris Weissman; Ruan Transportation Corporation; and Waggoner & Company; Industrial Disposal, Inc.; Sauget and Company; Paul Sauget.

4. On information and belief, parties which own and/or operate, or previously owned and/or operated, portions of the waste disposal areas (including individuals/parties that own/owned and/or operate/operated property where wastes migrated to) at Sauget Area 1 include but are not limited to the following:

SITE G: Harold Wiese; Cerro Copper Products Company.

SITE H: Leo Sauget; Rogers Cartage Company.

SITE I: Leo Sauget; Paul Sauget; Cerro Copper Products Company; Alton & Southern Railroad; Village of Sauget.

SITE L: Tony and Velma Lechner (Metro Construction Equipment); Keeley L. Paving and Construction Company; Ruan Transport Corporation; and Harold Waggoner (Waggoner & Company); Rogers Cartage.

SITE M: H.H. Hall Construction Company, Incorporated;

SITE N: Leo Sauget; Mobil Oil Corporation; H.H. Hall Construction Company, Incorporated.

DEAD CREEK SEGMENT CS-A: Cerro Copper Products, Incorporated; Alton & Southern Railroad.

DEAD CREEK SEGMENT CS-B: Cerro Copper Products, Incorporated; Genex; Metro Construction Equipment Incorporated; and Moto, Incorporated; Harold Wiese.

DEAD CREEK SEGMENTS C, D, E or F: Genex; Mobil Oil Corporation; Anheuser-Busch, Inc.; Norfolk Southern Corporation; Union Electric Company.

IV. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, and the Administrative Record in this matter, U.S. EPA has determined that:

1. The Sauget Area 1 Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
2. The substances described in Section III, paragraph 2 are "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
3. Monsanto and Solutia are each a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
4. The parties listed in Section III, paragraph 4, are the past and present "owners" or operators of the Sauget Area 1 Site, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20). The parties listed in Section III, paragraph 3, are persons who generated or who arranged for disposal or transport for disposal of hazardous substances at the Sauget Area 1 Site. The parties listed in Section III, paragraphs 3 and 4 of this Order are therefore liable persons under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).
5. The conditions described in the Findings of Fact above constitute an actual or threatened "release" into the "environment" as defined by Sections 101(8) and (22) of CERCLA, 42 U.S.C. §§ 9601(8) and (22).
6. The conditions present at the Site constitute a threat to public health, welfare, or the environment based upon the factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan, as amended ("NCP"), 40 CFR Part 300. These factors include, but are not limited to, the following:
 - a. actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants; this factor is present at the Site due to the presence of elevated levels of contaminants, including VOCs, SVOCs, PCBs, dioxins, pesticides, and metals, in the surface soils, sediments and surface water of the disposal areas of the Site (i.e., Sites I, H, G, L, M, and N) and in all segments of Dead Creek (CS-A through CS-F).

Based upon the foregoing Findings of Fact, Conclusions of Law and Determinations, and the Administrative Record for this Site, it is hereby ordered and agreed that Respondents shall comply with the following provisions, including but not limited to all attachments to this Order, and all documents incorporated by reference into this Order, and perform the following actions:

1. Designation of Contractor, Project Coordinator, On-Scene Coordinator or Remedial Project Manager

Respondents shall perform the actions required by this Order themselves or retain a contractor to undertake and complete the requirements of this Order. Respondents shall notify U.S. EPA of Respondents' qualifications or the name and qualifications of such contractor, whichever is applicable, within 10 business days of the effective date of this Order. Respondents shall also notify U.S. EPA of the name and qualifications of any other contractors or subcontractors retained to perform work under this Order at least 5 business days prior to commencement of such work. U.S. EPA retains the right to disapprove of the Respondents or any of the contractors and/or subcontractors retained by the Respondents. If U.S. EPA disapproves a selected contractor, Respondents shall retain a different contractor within 5 business days following U.S. EPA's disapproval, and shall notify U.S. EPA of that contractor's name and qualifications within 8 business days of U.S. EPA's disapproval.

Within 5 business days after the effective date of this Order, the Respondents shall designate a Project Coordinator who shall be responsible for administration of all the Respondents' actions required by the Order. Respondents shall submit the designated coordinator's name, address, telephone number, and qualifications to U.S. EPA. U.S. EPA retains the right to disapprove of any Project Coordinator named by the Respondents. If U.S. EPA disapproves a selected Project Coordinator, Respondents shall retain a different Project Coordinator within 8 business days following U.S. EPA's disapproval and shall notify U.S. EPA of that person's name and qualifications within 9 business days of U.S. EPA's disapproval. Receipt by Respondents' Project Coordinator of any notice or communication from U.S. EPA relating to this Order shall constitute receipt by all Respondents.

The U.S. EPA has designated Michael McAteer of the Remedial Response Branch, Region 5, as its Remedial Project Manager ("RPM"). Respondents shall direct all submissions required by this Order to the RPM at 77 West Jackson Boulevard, (SR-6J), Chicago, Illinois 60604-3590, by certified or express mail. Respondents shall also send a copy of all submissions to Thomas Martin, Associate Regional Counsel, 77 West Jackson Boulevard, (C-14J), Chicago, Illinois, 60604-3590. All Respondents are encouraged to make their submissions to U.S. EPA on recycled

paper (which includes significant postconsumer waste paper content where possible) and using two-sided copies.

U.S. EPA and Respondents shall have the right, subject to the immediately preceding paragraph, to change their designated RPM or Project Coordinator. U.S. EPA shall notify the Respondents, and Respondents shall notify U.S. EPA, as early as possible before such a change is made, but in no case less than 24 hours before such a change. The initial notification may be made orally but it shall be promptly followed by a written notice within two business days of oral notification.

2. Work to Be Performed

Respondents shall develop and submit to U.S. EPA an EE/CA report and RI/FS report in accordance with the attached Scope of Work ("SOW"). This SOW is incorporated into and made an enforceable part of this Order.

The EE/CA Report shall be consistent with, U.S. EPA guidance entitled, "Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA", EPA/540-R-93-057, Publication 9360.32, PB 93-963402, dated August 1993. The RI/FS report shall be consistent with, at a minimum, U.S. EPA guidance entitled, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA" (U.S. EPA, Office of Emergency and Remedial Response, October, 1988) and any other guidances that U.S. EPA uses in conducting a RI/FS.

2.1 EE/CA and RI/FS Support Sampling Plan

Within 30 calendar days of the effective date of this Order, the Respondents shall submit to U.S. EPA for approval a draft EE/CA and RI/FS Support Sampling Plan that is consistent with this Order and the SOW.

U.S. EPA may approve, disapprove, require revisions to, or modify the draft EE/CA and RI/FS Support Sampling Plan. If U.S. EPA requires revisions, Respondents shall submit a revised Support Sampling Plan incorporating all of U.S. EPA's required revisions within 21 calendar days of receipt of U.S. EPA's notification of the required revisions.

In the event of U.S. EPA disapproval of the revised Support Sampling Plan, Respondents may be deemed in violation of this Order; however, approval shall not be unreasonably withheld by U.S. EPA. In such event, U.S. EPA retains the right to terminate this Order, conduct a complete Support Sampling Plan and the sampling activities, and obtain reimbursement for costs incurred in conducting the plan and the sampling activities from the Respondents.

Respondents shall not commence or undertake any support sampling activities at the Site without prior U.S. EPA approval.

2.1.1 Health and Safety Plan

As part of the EE/CA and RI/FS Support Sampling Plan, the Respondents shall submit for U.S. EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-site work under this Order. This plan shall comply with applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 CFR Part 1910. If U.S. EPA determines it is appropriate, the plan shall also include contingency planning. Respondents shall incorporate all changes to the plan recommended by U.S. EPA, and implement the plan during the pendency of the support sampling.

2.1.2 Quality Assurance and Sampling

As part of the EE/CA and RI/FS Support Sampling Plan, the Respondents shall ensure that all sampling and analyses performed pursuant to this Order conforms to U.S. EPA direction, approval, and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. Respondent(s) shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with U.S. EPA guidance.

Upon request by U.S. EPA, Respondent(s) shall have such a laboratory analyze samples submitted by U.S. EPA for quality assurance monitoring. Respondent(s) shall provide to U.S. EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis. Respondent(s) shall also ensure provision of analytical tracking information consistent with, at a minimum, OSWER Directive No. 9240.0-2B, "Extending the Tracking of Analytical Services to PRP-Lead Superfund Sites."

Upon request by U.S. EPA, Respondent(s) shall allow U.S. EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondent(s) or its (their) contractors or agents while performing work under this Order. Respondent(s) shall notify U.S. EPA not less than 10 business days in advance of any sample collection activity. U.S. EPA shall have the right to take any additional samples that it deems necessary.

2.2 EE/CA Report

Within 60 calendar days after the submittal of the Data Report (Task 3 of the SOW), the Respondents shall submit to U.S. EPA for approval a draft EE/CA Report that is consistent with this Order and the SOW.

U.S. EPA may approve, disapprove, require revisions to, or modify the draft EE/CA Report. If U.S. EPA requires revisions, Respondents shall submit a revised EE/CA Report incorporating all of U.S. EPA's required revisions within 21 calendar days of receipt of U.S. EPA's notification of the required revisions.

In the event of U.S. EPA disapproval of the revised EE/CA Report, Respondents may be deemed in violation of this Order; however, approval shall not be unreasonably withheld by U.S. EPA. In such event, U.S. EPA retains the right to terminate this Order, conduct a complete EE/CA, and obtain reimbursement for costs incurred in conducting the EE/CA from the Respondents.

The revised report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this EE/CA Report, the information submitted is true, accurate, and complete.

Respondents shall not commence or undertake any removal actions at the Site without prior U.S. EPA approval.

2.3 RI/FS Report

Within 90 calendar days after the submittal of the Data Report (Task 3 of the SOW), the Respondents shall submit to U.S. EPA for approval a draft RI/FS Report (for groundwater) that is consistent with this Order and the SOW.

U.S. EPA may approve, disapprove, require revisions to, or modify the draft RI/FS Report. If U.S. EPA requires revisions, Respondents shall submit a revised RI/FS Report incorporating all of U.S. EPA's required revisions within 21 calendar days of receipt of U.S. EPA's notification of the required revisions.

In the event of U.S. EPA disapproval of the revised RI/FS Report, Respondents may be deemed in violation of this Order; however, approval shall not be unreasonably withheld by U.S. EPA. In such event, U.S. EPA retains the right to terminate this Order, conduct a complete RI/FS, and obtain reimbursement for costs incurred in conducting the RI/FS from the Respondents.

The revised report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this RI/FS Report, the information submitted is true, accurate, and complete.

Respondents shall not commence or undertake any remedial actions at the Site without prior U.S. EPA approval.

2.4 Reporting

Respondent(s) shall submit a monthly written progress report to U.S. EPA concerning actions undertaken pursuant to this Order, beginning 30 calendar days after the effective date of this Order, until termination of this Order, unless otherwise directed in writing by the RPM. These reports shall describe all significant developments during the preceding period, including the work performed and any problems encountered, analytical data received during the reporting period, and developments anticipated during the next reporting period, including a schedule of work to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

Any Respondent that owns any portion of the Site shall, at least 30 days prior to the conveyance of any interest in real property at the Site, give written notice of this Order to the transferee and written notice of the proposed conveyance to U.S. EPA and the State. The notice to U.S. EPA and the State shall include the name and address of the transferee. The party conveying such an interest shall require that the transferee will provide access as described in Section V.3 (Access to Property and Information).

2.5 Additional Work

In the event that the U.S. EPA or the Respondent(s) determine(s) that additional work is necessary to accomplish the objectives of the EE/CA Report and RI/FS Report, notification of such additional work shall be provided to the other part(y)(ies) in writing. Any additional work which Respondent(s) determine(s) to be necessary shall be subject to U.S. EPA's written approval prior to commencement of the additional work. Respondent(s) shall complete, in accordance with standards, specifications, and schedules U.S. EPA has approved, any additional work Respondent(s) has (have) proposed, and which U.S. EPA has approved in writing or that U.S. EPA has determined to be

necessary, and has (have) provided written notice of pursuant to this paragraph.

3. Access to Property and Information

Respondent(s) shall provide or obtain access to the Site and off-site areas to which access is necessary to implement this Order, and shall provide access to all records and documentation related to the conditions at the Site and the actions conducted pursuant to this Order. Such access shall be provided to U.S. EPA employees, contractors, agents, consultants, designees, representatives, and State of Illinois representatives. These individuals shall be permitted to move freely at the Site and appropriate off-site areas to which Respondent(s) have access in order to conduct actions which U.S. EPA determines to be necessary. Respondent(s) shall submit to U.S. EPA, upon receipt, the results of all sampling or tests and all other data generated by Respondent(s) or its (their) contractor(s), or on the Respondent(')s(') behalf during implementation of this Order.

Respondent(s) shall use its (their) best efforts to obtain all necessary access agreements within 30 calendar days after the effective date of this Order, or as otherwise specified in writing by the RPM. Respondent(s) shall immediately notify U.S. EPA within 2 business days if, after using its (their) best efforts, it is (they are) unable to obtain such agreements. Respondent(s) shall describe in writing its (their) efforts to obtain access. U.S. EPA may, in its discretion, then assist Respondent(s) in gaining access, to the extent necessary to effectuate the actions described herein, using such means as U.S. EPA deems appropriate. Respondent(s) shall reimburse U.S. EPA for all costs and attorneys fees incurred by the United States in obtaining such access.

4. Record Retention, Documentation, Availability of Information

Respondent(s) shall preserve all documents and information in their possession relating to work performed under this Order, or relating to the hazardous substances found on or released from the Site, for six years following completion of the actions required by this Order. At the end of this six year period and at least 60 days before any document or information is destroyed, Respondent(s) shall notify U.S. EPA that such documents and information are available to U.S. EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to U.S. EPA. In addition, Respondent(s) shall provide copies of any such non-privileged documents and information retained under this Section at any time before expiration of the six year period at the written request of U.S. EPA.

If Respondent(s) assert a privilege in lieu of providing documents, they shall provide U.S. EPA with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the contents of the document, record, or information; and (6) the privilege asserted by Respondent(s). However, no documents, reports, or other information created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

5. Off-Site Shipments

All hazardous substances, pollutants or contaminants removed off-site pursuant to this Order for treatment, storage or disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by U.S. EPA, with the U.S. EPA Revised Off-Site Rule, 40 CFR § 300.440, 58 Federal Register 49215 (Sept. 22, 1993).

6. Compliance With Other Laws

Respondent(s) shall perform all activities required pursuant to this Order in accordance with all the requirements of all federal and state laws and regulations. U.S. EPA has determined that the activities contemplated by this Order are consistent with the National Contingency Plan ("NCP").

Except as provided in Section 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the activities conducted entirely on-site. Where any portion of the activities requires a federal or state permit or approval, the Respondent(s) shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

7. Emergency Response and Notification of Releases

If any incident, or change in Site conditions, during the activities conducted pursuant to this Order causes or threatens to cause an additional release of hazardous substances from the Site or an endangerment to the public health, welfare, or the environment, the Respondent(s) shall immediately take all appropriate action to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent(s) shall also immediately notify the RPM or, in the event of his unavailability, shall notify the Regional Duty Officer, Emergency Response Branch, Region 5 at (312) 353-2318, of the incident or

Site conditions. If Respondent(s) fail(s) to respond, U.S. EPA may respond to the release or endangerment and reserve the right to recover costs associated with that response.

Respondent(s) shall submit a written report to U.S. EPA within 7 business days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. Respondent(s) shall also comply with any other notification requirements, including those in CERCLA Section 103, 42 U.S.C. § 9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act, 42 U.S.C. § 11004.

VI. AUTHORITY OF THE U.S. EPA REMEDIAL PROJECT MANAGER

The RPM shall be responsible for overseeing the implementation of this Order. The RPM shall have the authority vested in an RPM by the NCP, including the authority to halt, conduct, or direct any activities required by this Order, or to direct any other response action undertaken by U.S. EPA or Respondent(s) at the Site. Absence of the RPM from the Site shall not be cause for stoppage of work unless specifically directed by the RPM.

VII. REIMBURSEMENT OF COSTS

Respondent(s) shall pay all oversight costs of the United States related to the Site that are not inconsistent with the NCP. U.S. EPA will send Respondent(s) a bill for "oversight costs" on an annual basis. "Oversight costs" are all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Order. Respondent(s) shall, within 30 calendar days of receipt of a bill, remit a cashier's or certified check for the amount of the bill made payable to the "Hazardous Substance Superfund," to the following address:

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 70753
Chicago, Illinois 60673

Respondent(s) shall simultaneously transmit a copy of the check to the Director, Superfund Division, U.S. EPA Region 5, 77 West Jackson Blvd., Chicago, Illinois, 60604-3590. Payments shall be designated as "Response Costs - Sauget Area 1 Site" and shall reference the payor(')s(') name and address, the EPA site identification number (054V/0560), and the docket number of this Order.

In the event that any payment is not made within the deadlines described above, Respondent(s) shall pay interest on the unpaid balance. Interest is established at the rate specified in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). The interest shall begin to accrue on the date of the Respondent's receipt of the bill. Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent(')(s)(') failure to make timely payments under this Section.

If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondent(s) shall pay the full amount of the uncontested costs into the Hazardous Substance Fund as specified above on or before the due date. Within the same time period, Respondent(s) shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondent(s) shall simultaneously transmit a copy of both checks to the RPM. Respondent(s) shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within 20 calendar days after the dispute is resolved.

VIII. DISPUTE RESOLUTION

The parties to this Order shall attempt to resolve, expeditiously and informally, any disagreements concerning this Order.

If the Respondent(s) object(s) to any U.S. EPA action taken pursuant to this Order, including billings for response costs, the Respondent(s) shall notify U.S. EPA in writing of its (their) objection(s) within 10 calendar days of such action, unless the objection(s) has (have) been informally resolved. This written notice shall include a statement of the issues in dispute, the relevant facts upon which the dispute is based, all factual data, analysis or opinion supporting Respondent(')(s)(') position, and all supporting documentation on which the Respondent(s) rely (hereinafter the "Statement of Position").

U.S. EPA and Respondent(s) shall within 15 calendar days of U.S. EPA's receipt of the Respondent(')(s)(') Statement of Position, attempt to resolve the dispute through formal negotiations (Negotiation Period). The Negotiation Period may be extended at the sole discretion of U.S. EPA. U.S. EPA's decision regarding an extension of the Negotiation Period shall not constitute a U.S. EPA action subject to dispute resolution or a final Agency action giving rise to judicial review.

An administrative record of any dispute under this Section shall be maintained by U.S. EPA. The record shall include the written notification of such dispute, and the Statement of Position served pursuant to the preceding paragraph.

Any agreement reached by the parties pursuant to this Section shall be in writing, signed by all parties, and shall upon the signature by the parties be incorporated into and become an enforceable element of this Order. If the parties are unable to reach an agreement within the Negotiation Period, the Director of the Superfund Division of Region 5, U.S. EPA, will issue a written decision on the dispute to the Respondents. The decision of the Division Director shall be incorporated into and become an enforceable element of this Order upon Respondent(')(s)(') receipt of the Division Director's decision regarding the dispute.

Respondent(')(s)(') obligations under this Order shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent(s) shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with the Division Director's decision, whichever occurs. No U.S. EPA decision made pursuant to this Section shall constitute a final Agency action giving rise to judicial review.

IX. FORCE MAJEURE

Respondent(s) agree(s) to perform all requirements under this Order within the time limits established under this Order, unless the performance is delayed by a force majeure. For purposes of this Order, a force majeure is defined as any event arising from causes beyond the control of Respondent(s) or of any entity controlled by Respondent(s), including but not limited to its (their) contractors and subcontractors, that delays or prevents performance of any obligation under this Order despite Respondent(')(s)(') best efforts to fulfill the obligation. Force majeure does not include financial inability to complete the work or increased cost of performance.

Respondent(s) shall notify U.S. EPA orally within 24 hours after Respondent(s) become aware of any event that Respondent(s) contend(s) constitute a force majeure, and in writing within 7 calendar days after Respondents(s) become aware of any events which constitute a force majeure. Such notice shall: identify the event causing the delay or anticipated delay; estimate the anticipated length of delay, including necessary demobilization and re-mobilization; state the measures taken or to be taken to minimize the delay; and estimate the timetable for implementation of the measures. Respondent(s) shall take all reasonable

measures to avoid and minimize the delays. Failure to comply with the notice provision of this Section shall be grounds for U.S. EPA to deny Respondent(s) an extension of time for performance. Respondent(s) shall have the burden of demonstrating by a preponderance of the evidence that the event is a force majeure, that the delay is warranted under the circumstances, and that best efforts were exercised to avoid and mitigate the effects of the delay.

If U.S. EPA determines a delay in performance of a requirement under this Order is or was attributable to a force majeure, the time period for performance of that requirement shall be extended as deemed necessary by U.S. EPA. Such an extension shall not alter Respondent(s)(')(s) obligation to perform or complete other tasks required by the Order which are not directly affected by the force majeure.

X. STIPULATED AND STATUTORY PENALTIES

Except for extensions allowed by U.S. EPA in writing pursuant to Section XVI. of the Order by Consent, or excused by the provisions of Force Majeure in Section IX. herein, for each calendar day, or portion thereof, that Respondent(s) fail(s) to fully perform any requirement of this Order in accordance with the schedule established pursuant to this Order, Respondent(s) shall be liable as follows:

[PENALTY SCHEDULE ON NEXT PAGE]

<u>Deliverable/Activity</u>	<u>Penalty For Days 1-7</u>	<u>Penalty For > 7 Days</u>
Failure to Submit a Draft Support Sampling Plan, EE/CA Report, or RI/FS Report	\$1,000/Day	\$2,500/Day
Failure to Submit a revised Support Sampling Plan, EE/CA Report, or RI/FS Report	\$1,000/Day	\$2,500/Day
Failure to Submit a Data Report	\$500/Day	\$1,000/Day
Late Submittal of Progress Reports or Other Miscellaneous Reports/Submittals	\$250/Day	\$500/Day
Failure to Meet any Scheduled Deadline in the Order [not mentioned in 1-4 immediately above]	\$250/Day	\$500/Day

Upon receipt of written demand by U.S. EPA, Respondent(s) shall make payment to U.S. EPA within 20 calendar days and interest shall accrue on late payments in accordance with Section VII of this Order (Reimbursement of Costs).

Even if violations are simultaneous, separate penalties shall accrue for separate violations of this Order. Penalties accrue and are assessed per violation per day. Penalties shall accrue regardless of whether U.S. EPA has notified Respondent(s) of a violation or act of noncompliance. The payment of penalties shall not alter in any way Respondent(s) obligation(s) to complete the performance of the work required under this Order. Stipulated penalties shall accrue, but need not be paid, during any dispute resolution period concerning the particular penalties at issue. If Respondent(s) prevail(s) upon resolution, Respondent(s) shall pay only such penalties as the resolution requires. In its unreviewable discretion, U.S. EPA may waive its rights to demand all or a portion of the stipulated penalties due under this Section.

The stipulated penalties set forth above shall not be the sole or exclusive remedy for violations of this Order. Violation of any

provision of this Order may subject Respondent(s) to civil penalties of up to twenty-five thousand dollars (\$25,000) per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Respondent(s) may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondent(s) violate this Order or any portion hereof, U.S. EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

XI. RESERVATION OF RIGHTS

Except as specifically provided in this Order, nothing herein shall limit the power and authority of U.S. EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent U.S. EPA from seeking legal or equitable relief to enforce the terms of this Order. U.S. EPA also reserves the right to take any other legal or equitable action as it deems appropriate and necessary, or to require the Respondent(s) in the future to perform additional activities pursuant to CERCLA or any other applicable law.

XII. OTHER CLAIMS

By issuance of this Order, the United States and U.S. EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent(s). The United States or U.S. EPA shall not be a party or be held out as a party to any contract entered into by the Respondent(s) or its (their) directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out activities pursuant to this Order.

Except as expressly provided in Section XIII (Covenant Not To Sue), nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against the Respondent(s) or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106(a) or 107(a) of CERCLA, 42 U.S.C. §§ 9606(a), 9607(a).

This Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2). The

Respondent(s) waive(s) any claim to payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund arising out of any action performed under this Order.

No action or decision by U.S. EPA pursuant to this Order shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XIII. COVENANT NOT TO SUE

Except as otherwise specifically provided in this Order, upon issuance of the U.S. EPA notice referred to in Section XVII (Notice of Completion), U.S. EPA covenants not to sue Respondent(s) for judicial imposition of damages or civil penalties or to take administrative action against Respondent(s) for any failure to perform actions agreed to in this Order except as otherwise reserved herein.

This Order does not address past response costs incurred at the Sauget Area One Site and U.S. EPA reserves its right to sue or to take administrative action against Respondent(s) and other potentially responsible parties under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), for recovery of past response costs incurred up to the date of entry of this Order by the United States in connection with this action or this Order.

This covenant not to sue is conditioned upon the complete and satisfactory performance by Respondent(s) of (its/their) obligations under this Order. This covenant not to sue extends only to the Respondent(s) and does not extend to any other person.

XIV. CONTRIBUTION PROTECTION

With regard to claims for contribution against Respondent(s) for matters addressed in this Order, the Parties hereto agree that the Respondent(s) is (are) entitled to protection from contribution actions or claims to the extent provided by Section 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4).

Nothing in this Order precludes Parties from asserting any claims, causes of action or demands against any persons not parties to this Order for indemnification, contribution, or cost recovery.

XV. INDEMNIFICATION

Respondent(s) agree(s) to indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all

claims or causes of action: (A) arising from, or on account of, acts or omissions of Respondent(s) and Respondent(')(s)(') officers, heirs, directors, employees, agents, contractors, subcontractors, receivers, trustees, successors or assigns, in carrying out actions pursuant to this Order; and (B) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between (any one or more of) Respondent(s), and any persons for performance of work on or relating to the Site, including claims on account of construction delays. Nothing in this Order, however, requires indemnification by Respondent(s) for any claim or cause of action against the United States based on negligent action taken solely and directly by U.S. EPA (not including oversight or approval of plans or activities of the Respondent(s)).

XVI. MODIFICATIONS

Except as otherwise specified in Section V.2 (Work To Be Performed), if any party believes modifications to any plan or schedule are necessary during the course of this project, they shall conduct informal discussions regarding such modifications with the other parties. Any agreed-upon modifications to any plan or schedule shall be memorialized in writing within 7 business days; however, the effective date of the modification shall be the date of the RPM's oral direction. Any other requirements of this Order may be modified in writing by mutual agreement of the parties. Any modification to this Order shall be incorporated into and made an enforceable part of this Order.

If Respondents seek permission to deviate from any approved plan or schedule, Respondents' Project Coordinator shall submit a written request to U.S. EPA for approval outlining the proposed modification and its basis and the RPM's approval shall not be unreasonably withheld.

No informal advice, guidance, suggestion, or comment by U.S. EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondents shall relieve Respondents of their obligations to obtain such formal approval as may be required by this Order, and to comply with all requirements of this Order unless it is formally modified.

XVII. NOTICE OF COMPLETION

When U.S. EPA determines that all work has been fully performed in accordance with this Order, except for certain continuing obligations required by this Order (e.g., record retention, payment of costs), U.S. EPA will provide written notice to the Respondents.

XVIII. SUBMITTALS/CORRESPONDENCE

Any notices, documents, information, reports, plans, approvals, disapprovals, or other correspondence required to be submitted from one party to another under this Order, shall be deemed submitted either when hand-delivered or as of the date of receipt by certified mail/return receipt requested, express mail, or facsimile.

Submissions to Respondents shall be addressed to:

Mr. D. Michael Light
Manager, Remedial Projects
Solutia Inc.
10300 Olive Blvd., F2EA
P.O. Box 66760
St. Louis, MO 63166

With copies to:

Joseph G. Nassif, Esq.
Thompson Coburn
One Mercantile Center
St. Louis, MO 63101

Submissions to U.S. EPA shall be addressed to:

Michael McAteer
U.S. EPA - Region 5
77 West Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

With copies to:

Thomas Martin
Associate Regional Counsel
U.S. EPA - Region 5
77 West Jackson Boulevard (C-14J)
Chicago, Illinois 606064-3590

Submissions to Illinois shall be addressed to:

Paul Takacs
Illinois Environmental Protection Agency
Remedial Project Management Section
Division of Land Pollution Control
1021 N. Grand Avenue E.
P.O. Box 19276
Springfield, Illinois 62794-9276

XIX. SEVERABILITY

If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XX. EFFECTIVE DATE

This Order shall be effective upon signature by the Director, Superfund Division, U.S. EPA Region 5.

IN THE MATTER OF:

SAUGET AREA 1 SITE
SAUGET AND CAHOKIA, ILLINOIS

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory, its directors, officers, employees, agents, successors and assigns, to this document.

Agreed this 12th day of January, 1999.

MONSANTO COMPANY

By: Solutia Inc.
Attorney-in-Fact

SOLUTIA INC.

By: D. Michael Light
D. Michael Light
Manager, Remedial Projects
Solutia Inc.

IT IS SO ORDERED AND AGREED

By: W. E. Muno
William E. Muno, Director
Superfund Division
United States Environmental Protection Agency
Region 5

DATE: 1/21/99